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ABSTRACT

The Stages of Concerns Questionnaire (SoCQ) is an established instrument which has been used primarily with inservice teachers involved in innovations. While it focuses on inservice teachers' concerns about an innovation, the instrument is based on theoretical constructs developed by the work of Frances Fuller and others during the 1960s with preservice teachers. The SoCQ has also been used in some studies with preservice teachers. These studies, others using related measures of concerns, and a pilot study have raised questions about the suitability of the SoCQ in its present form for use with this population. However, the demonstrated usefulness of the extant instrument and its generalizable theoretical base suggest that such a questionnaire may offer a means of measuring and assessing reforms and innovations in teacher preparation so widely called for and in process at this time. The purpose of this study was to examine the validity and reliability of a modified version of the SoCQ intended for use with preservice teachers in undergraduate and fifth-year teacher preparation programs. The results and validity and reliability procedures are reported. In addition, recommendations for further refinements and research are made. (CW)

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DEVELOPMENT OF A STAGES OF CONCERN QUESTIONNAIRE FOR PRESERVICE TEACHERS

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Abstract

Preliminary results of procedures to determine the validity of a modified version of the Stages of Concern Questionnaire (Hall, George, & Rutherford, 1986) for use with preservice teachers are reported. Subjects included preservice teachers in undergraduate and fifth-year teacher preparation programs and persons conversant with the SoCQ. Procedures included interviews with preservice teachers, reviews by a panel of judges, comparisons with the SoCQ and the Open-Ended measure of concern, administrations to student teachers early and late during student teaching, and a test-retest reliability check. Problem stages and items were identified, indicating a need for modifications. Degrees of concurrence with related measures, while adequate, suggested further investigation, as did the rather low test-retest reliability correlations. Results from administrations at the beginning and end of student teaching clearly showed that the instrument detects group differences, although questions remain regarding discernment of change over time. Some procedures and data analyses are still in progress. The data sets will be used for modifications and additional tests will be conducted. With reservations at this time, the Preservice Teachers Stages of Concern Questionnaire (PSSoCQ) appears to have potential as an instrument for individual and group diagnoses and between group comparisons.

INTRODUCTION

The reforms and innovations in teacher preparation so widely called for and in progress at this time will require ongoing evaluation of their impacts. One aspect of impact, identified by Frances Fuller in the late 1960s (1969) and utilized in the Concerns Based Adoption Model (CBAM) Project (Hall, 1985), is the concerns expressed by educators involved in change or innovation. Fuller identified a developmental sequence of concerns, from personal through task to impact, for preservice teachers during their preparation program. Based on this model, the CBAM Project later designed the Stages of Concern Questionnaire (SoCQ) (Hall, George, & Rutherford, 1986). This quickly administered and easily scored instrument identifies the extent of educators' concerns in seven areas or stages. The questionnaire has been widely and successfully used as a means of tailoring assistance and training efforts for inservice teachers (Hall, 1985).

While primary use of the SoCQ has been with inservice teachers involved in innovations, e.g., in curriculum or instruction, some studies have used the instrument with preservice teachers (Barnes, 1984; Barufaldi, 1982; Malone, 1984). Some of these and related studies (Adams, Hutchinson, & Martray, 1980; Cooperstein, 1981; Reeves & Kazelskis, 1985), plus a pilot study by the authors, have raised questions about the suitability of the SoCQ for use with preservice teachers. The present study's purpose is to examine various aspects of the validity of a slightly modified version of the instrument, identified here as the PSSoCQ for Preservice Stages of Concern Questionnaire, intended specifically for use with preservice teachers.

In brief, the questions addressed by the various aspects of this study are:

(1) Are items interpreted by preservice teachers according to intended meaning?

(2) Are items viewed as stage consistent by persons conversant with the SoCQ?

(3) Do responses to PSSoCQ stages concur with responses to SoCQ stages?

(4) Do responses to the PSSoCQ concur with responses on the Open-Ended instrument?

(5) Are differences between populations in different programs reflected in profiles?

(6) Are changes in concerns over time detected by the PSSoCQ?

(7) Does the PSSoCQ instrument demonstrate test-retest reliability?

METHODS

Pilot Study

The theoretical background and prior use of the SoCQ with preservice teachers prompted a pilot administration of the SoCQ to small groups of preservice science teachers enrolled in an undergraduate four-year program and a fifth-year graduate program in the spring of 1987. Marked differences between the two groups, in stages 3 (management) and 5 (collaboration), did indicate that the instrument seemed capable of revealing differences between groups. However, stage 6 (refocusing) scores for both groups were unusually high, a situation not predicted by theory. Similar, anomalous scores have been found by researchers (Adams, 1980; Cooperstein, 1981; Reeves, 1985) using the Teacher Concerns Questionnaire, a related instrument. With reservations about the theoretical construct, but encouraged by the differences found and the recommendations of those involved in the original development and use of the SoCQ (Hall, 1986; Hord, 1981; Rutherford, Note 1), the decision was made to proceed.

Another problem encountered during the pilot study was the confusion expressed by some participants about the meaning of certain items. Examination of the items and responses revealed possible misinterpretations by these preservice teachers. Discussion with Rutherford (Note 1) further suggested that some modification was necessary. Malone (1984), too, raised the question of relevancy and appropriateness in his use of the SoCQ and recommended changes. Modifications beyond substituting a term or phrase for the specific innovation for the word innovation in the statements of the SoCQ are contraindicated in the SoCQ manual. And, of course, such changes impact the established validity and reliability for any instrument. At this point, it was decided to use the original format, to modify the wording of items as minimally as possible, and

to determine the validity and reliability for the modified instrument.

The PSSoCQ Instrument

The total number of items (35) and item scoring on a seven-point scale (from "irrelevant" at 0 to "very true of me now" at 7) were retained on the modified version of the SoCQ. For the items themselves, 6 were unchanged and 14 were changed only by substituting "student teaching" for "innovation." For the remaining 15 items, slight alterations were made in phrasing, most of which involved a phrase referring to the innovation with "student teaching." The sequence of items was left unchanged.

On the directions page of the instrument (see Manual, p. 60), the section beginning "We do not hold..." and ending "...all refer to teaming," was changed to: "By student teaching we are referring to practice teaching, directing learning of pupils in a classroom with the assistance and supervision of (a) cooperating teacher(s) and university supervisor(s), however, please think of it in terms of your own perceptions of what it involves." "Teaming" was replaced by "student teaching" in two other sentences as well. [A copy of the PSSoCQ may be requested from either author.]

Other Measures

The Stages of Concern Questionnaire, from the manual (Hall, George, & Rutherford, 1986), was used with preservice teachers in one part of this study and in the pilot study. The words "student teaching" were substituted for "teaming" in the directions in two places. The two sentence section beginning "Since this questionnaire..." and ending "...refer to teaming," was deleted. The items themselves were left unchanged. The individual items, again as they appear in the manual, and the stage descriptions from the manual were used in the written tasks completed by the panel of reviewers.

The Open-Ended Statements of Concern measure, from the manual (Newlove & Hall, 1976) was used with preservice teachers in one part of the study. The directions on the measure were modified by substituting "student teaching" for "using innovations," "the innovation adoption process," "the innovation of teaming," and "teaming" (in two places). In place of the sentence beginning, "We do not hold...," the following was

used: "By student teaching, we are referring to practice teaching, directing learning of pupils in a classroom with the assistance and supervision of (a) cooperating teacher(s) and university supervisor(s); however, please think of it in terms of your own perceptions of what it involves."

Subjects

A total of 92 subjects from the fifth-year graduate teacher preparation program at a state university with approximately 23,000 students located in city of 650,000 and a total of 80 subjects from the four year undergraduate teacher preparation program at a state university with approximately 2,600 students located in a city of 2,500 were used in the various parts of the study. Separate groups, reflecting intact classes in various course sections, were used for each part; groups from both programs were used in each part of the study. No single subject in the parts reported here was a participant in more than one part of the study.

The subjects from the fifth-year program averaged 33 years of age and 3.3 in overall GPA. Many were married and many had children of their own. All were preparing to be middle or high school teachers and their subject areas ranged across all disciplines. Their professional education program for the preliminary credential is usually completed within two semesters and includes 15 credit hours of on-campus courses and 17 credit hours of observation and student teaching. Approximately 100 hours of observation in the classrooms of their future supervising teachers occurs in the semester prior to approximately 180 hours of student teaching commencing with full instructional responsibility on the first day of the semester and continuing throughout the schools' semesters. The schools are urban or suburban and many schools have a predominantly non-white student population.

The subjects from the undergraduate program averaged 23 years of age and 3.0 in overall GPA. Few were married and few had children of their own. Some were preparing to be elementary teachers and others secondary science teachers. Their professional education program is distributed throughout their four-year baccalaureate program and

includes 21 credit hours of on campus courses and 15 credit hours of observation and student teaching. Approximately 36 hours of observation, often not with their future supervising teachers, occurs during the semester prior to approximately 360 hours of student teaching, with instructional responsibility gradually assumed during the latter. The schools are rural and their student populations are predominantly white.

Seven persons conversant with the SoCQ instrument, through development and/or use of the instrument, were requested to review the PSSoCQ. All of these persons are faculty involved with teacher preparation at the university level. Six of them responded to the first aspect (stage assignment) of the review and five of them responded to the second aspect (differences between SoCQ and PSSoCQ statements).

Procedures

The validity of an instrument has several aspects, each of which is investigated in somewhat different ways. This study examines the PSSoCQ instrument in terms of content, concurrent, and construct validity and test-retest reliability through six distinct procedures to obtain data for addressing the seven questions which appear at the end of the introduction section.

The examination of content validity involved two procedures addressing the questions of preservice teachers' and reviewers' interpretation of items. In the first, ten preservice teachers from each population (fifth-year and undergraduate) were interviewed by the on-site researcher during the week following their completion of the PSSoCQ. For most of the subjects, this was early in the observation semester prior to student teaching. Each subject responded to questions about seven items, one from each of the seven postulated stages: "What did you understand this statement to mean?" and "Why did you respond this way?" (referring to subject's response on the scale from irrelevant to very true of me now). Overall, each item was addressed four times. The interviews were audiotaped for later, independent scoring by the two researchers.

In attempt to reduce the subjectivity involved in interpreting the interviews and to quantify essentially qualitative data, each subject's responses to each item was scored as a yes or no on three points. Point one was understanding of the statement with regard to stage; point two was responding correctly (as the subject intended) on the Likert scale; and point three was verbally expressed confusion. Interscorer reliability was calculated as percentage agreement, based on sixty possible agreements per stage--coding of four subjects' responses on three points for five items per stage: number of actual agreements / (4 x 3 x 5) x 100%. The same arithmetical procedure was used to calculate the percentage of problem points for subjects; problems were counted whether identified just one or both scorers. The percentage of students with problems on items within stages was treated separately; this calculation was based on four students responding to each of five items per stage: number of students with problems / (4 x 5) x 100%. For ease of comparison with results on other procedures, the reduced data reported here are shown as percentages of "no problems" and "subjects without problems" for each of the seven stages. Individual items identified by these procedures as particularly problematic are also identified.

In the reviews by persons conversant with the SoCQ instrument, the participants completed two written tasks. In the first, six reviewers assigned statements from the PSSoCQ to the seven stages. The items were listed in the order they appear on the instrument; stage descriptions from the SoCQ manual were provided. In the second, five reviewers (one reviewer did not complete this task) compared the items of the PSSoCQ with those of the SoCQ by indicating no difference or by describing differences in meaning. Each PSSoCQ item was paired with the original SoCQ item and listed in instrument sequence. The response sheets for the tasks, with an explanatory letter requesting participation, were mailed to the reviewers and were returned by mail. Follow-up conversations for clarification of some responses were conducted with four of the six participants. For task one, stage assignment, the percentage of "correct" responses was calculated. For task two, involving perceived differences, the

percentage of "no difference" responses was calculated. Averages for the seven stages on both tasks and items with overall low response percentages are reported.

The examination of concurrent validity addressing the questions of concurrence of responses on the PSSoCQ with those on the SoCQ and the Open-Ended Statements of Concern measure involved dual administrations of these instruments. Twenty subjects from the fifth-year and twelve from the undergraduate populations completed the PSSoCQ and then the SoCQ on the same day, with a two to three hour interval between completions. Administration took place during the early part of the observation semester prior to student teaching. Pearson product-moment correlation coefficients were calculated on scores for each of the seven stages.

Different subjects, 28 from the fifth-year and 25 from the undergraduate populations, completed the Open-Ended Statements of Concern measure and then the PSSoCQ on the same day, with a two to three hour interval between completions. Administration took place during the early part of the observation semester prior to the student teaching semester. Copies of responses on the Open-Ended measure were made and exchanged by the researchers for independent scoring. Scoring procedures followed the guidelines in the manual (Newlove & Hall, 1976). Stages assigned to the responses of each subject by the two scorers were compared for the predominating stage reflected by the response and the second stage reflected. Simple percentages of agreements between scorers on each of these and a percentage of agreement without regard for order (predominating/second) are reported. Stages assigned by the scorers were compared to the highest and second-highest scores, both raw and percentile (from SoCQ tables) on the PSSoCQ. Again, simple percentages of agreements between scores, without regard for order, are reported separately for the raw and percentile PSSoCQ scores and separately for both scorers.

The procedure for examining the developmental and discriminant aspects of the PSSoCQ's validity involved administration of the PSSoCQ near the beginning and again near the end of student teaching. For the undergraduate group, the second

administration was the day after they completed student teaching; for the fifth-year group, it was two days before the Christmas break, after which they would return to their classrooms for an additional three to four weeks of student teaching. The interval between administrations was 12 weeks. This procedure, for 17 subjects from the fifth-year and 12 from the undergraduate populations, has been completed. The data reported here are profiles of percentile (from SoCQ tables) averages of the two populations on each stage for the early and late administrations. The profiles of the pilot study groups (fifth-year N = 13; undergraduate N - 9) completing the SoCQ in the spring of 1987 are also provided for comparison purposes.

In order to more thoroughly address the questions of changes over time detectable and differences between the two populations, larger groups are being followed over both their observation and student teaching semesters. As these groups are currently student teaching, the final administration of the PSSoCQ will not be made until late spring of 1988 and these data are not yet available.

The final procedure of the current study examined test-retest reliability. The PSSoCQ was administered on two occasions, one week apart, to 17 subjects from the fifth-year and 21 from the undergraduate populations. Administration took place during the early part of the observation semester prior to student teaching. Pearson product-moment correlation coefficients were calculated on percentile scores for each of the seven stages.

RESULTS

This section treats the results of each of the six procedures separately. Numerical data from four of these is presented in the Summary Data Table; separate figures are provided for data from the comparison of the PSSoCQ with the Open-Ended measure and for data from the subjects completing the PSSoCQ at the beginning and end of their student teaching.

Interviews With Preservice Teachers

Twenty preservice teachers were interviewed following the administration of the PSSoCQ. One reduction of interview data yielded an overall value of 84%, or no problems in interpretation of PSSoCQ items on 352 of 420 points of assessment (60 points/stage x 7 stages). With regard to the total number of problems, the most problematical stages were 6--Refocusing, 4--Consequence, and 5--Collaboration; least problematical were 3--Management and 1--Informational and 2--Personal. (See Summary Data Table, Interviews with Students, first percentage reported.) The second data reduction revealed the percentage of students with problems: 34%, or 47 of 140 instances (4 Ss/item x 5 items/stage x 7 stages). (The second percentages reflect this reduction.) Both analyses ranked the stages similarly in terms of degree of problems.

The number of individual items identified as particularly problematical corresponded to these differences among the stages (these are noted in the Table). Seven items received "perfect" scores: #3 in Stage 0--Awareness; #15 and #26 in Stage 1--Informational; #33 in Stage 2--Personal; #4 in Stage 3--Management; #1 in Stage 4--Consequence; and #9 in Stage 6--Refocusing. The interviewers noted that a number of responses to items in Stage 4, Consequence, included personal references. There were also a few comments on negative phrasing and to whom the word "students" in the items referred.

Overall agreement between the two scorers of the interviews was 88%. By stage these were: 0 - 87%, 1 - 93%, 2 - 90%, 3 - 93%, 4 - 83%, 5 - 85%, and 6 - 83%. The number of disagreements on the three points assessed were similar: 18 on point 1, 15 on point 2, and 18 on point 3. One scorer tended to be slightly more critical, and slightly more problems were discerned by both scorers in the fifth-year subjects.

Reviews By Judges

The percentages of correct assignment of PSSoCQ statements to stages and of perceived differences in meaning between PSSoCQ and SoCQ statements varied

considerably among the seven stages. (See Summary Data Table, Reviews by Panel of Judges; the first percentage reflects stage assignment and the second percentage reflects "no differences.") Stage 2--Personal, was the most problematical, closely followed by Stages 1--Informational, 5--Collaboration, and 6--Refocusing. The assignment to stage was also low for Stage 3--Management, although no reviewer commented on differences in meaning for any of the five items. Eleven items appeared especially problematical, as indicated by reviewers either misassigning items or commenting on differences in meaning, or both (these are noted in the Table). Eight items received "perfect" scores of 100/100: #3, #12, #21, and #30 in Stage 0--Awareness; #6 in Stage 1--Informational; #34 in Stage 3--Management; #11 and #19 in Stage 4--Consequence; and #27 in Stage 5--Collaboration. A number of comments queried applicability of items, referents in the items, e.g., students, and clarity or meaning of items to student teachers; a few suggestions for changes in wording were made.

Comparison With The SoCQ

The Pearson product-moment correlation coefficients on stage score totals for the PSSoCQ and the SoCQ appear in the Summary Data Table. These are the coefficients for the combined groups, N = 32, with 20 fifth-year subjects and 12 undergraduate subjects. While those for stages 0, 1, and 2 are low, all are significant at the .01 level. Coefficients (not reported here) computed separately for the two groups varied by more than .10 for stages 0, 1, 4, and 6, and not all of these were significant at the .01 level.

Comparison With The Open-Ended Measure

The bar graph in Figure 1 shows agreements for the Open-Ended measure and PSSoCQ comparison. The agreement between stages identified on the Open-Ended measure and the two highest scores on the PSSoCQ is approximately 50%. Percentage agreements with raw and normed percentile scores are similar, and these are likewise similar for the two scorers of the Open-Ended measure. Because the percentile scores are taken from SoCQ tables, the raw score comparisons are provided. Agreement between the two scorers was

high, 89%, for the first or predominating stage identified, middling, 51%, for the second stage, and moderate, 75%, overall. In the tabulation of the raw data (not shown here), it was noted that Stage 2, Personal, was identified in the responses on the Open-Ended measure in all subjects' responses by one scorer and in all but three subjects' responses by the other scorer. The tabulation also showed that Stage 2 concerns on the PSSoCQ were not among the highest for 23% of the subjects using percentile scores nor for 32% of the subjects using the raw scores.

Student Teachers

The averaged profiles for the two groups who completed the PSSoCQ on two occasions, early and late during their student teaching, are provided in Figure 2. The profiles from the pilot study, using the SoCQ, are also provided in Figure 2.

Comparison of the profiles indicates several differences between the groups. The highest stage of concern for the fifth-year group is 3--Management, both early and late, and for the undergraduate group it is 5--Collaboration, both early and late. The intensity of concerns is higher overall, especially late, for the fifth-year group. The undergraduate group shows an overall decline in intensity of concerns between early and late administrations while the fifth-year group exhibits increases in some stages and decreases in others. The two groups are more similar in their second and third highest concerns, with Stages 6--Refocusing, 2--Personal, and 4--Consequence, appearing. The highest concerns of each group do not figure significantly as a secondary concern of the other group. Similar comparisons can be made between the groups completing the SoCQ in the pilot study, although Stage 3, Management, concerns figured more predominantly for the undergraduate group.

With respect to changes over time, the overall profiles for both groups have similar shapes for the early and late administrations. Only in the third highest concern does the fifth-year group vary, with Stage 5 dropping out and Stages 0 and 4 appearing. The undergraduate group changes Stage 2 from a second high to a third high concern and vice versa on Stage 6, with Stage 3 disappearing from a third high concern

and Stage 0 appearing as a second high concern. The overall intensity of concerns remains high for the fifth-year group and diminishes for the undergraduate group. The pilot study results were again comparable in these respects.

The fifth-year group's overall profiles are a close approximation of that identified in the SoCQ manual (Hall et al, 1986; p. 47) for high management concerns with ideas. The undergraduate group's overall profiles do not reflect a typical pattern identified in the Manual; the split of peak concerns between Stages 2 and 5 is anomalous. The high Management, Stage 3, and Personal, Stage 2, concerns expected from theory for beginning users are only partially evident in these two groups.

Test-Retest

The Pearson product-moment correlation coefficients on stage score totals for the test-retest procedure appear in the Summary Data Table. These are coefficients for the combined groups, N = 38, with 17 fifth-year subjects and 21 undergraduate subjects. Even the highest coefficient, .727 for Stage 1, is low for a reliability coefficient, although all are significant at the .01 level. Coefficients (not reported here) computed separately for the two groups varied by as much as .3 (Stage 6). The SoCQ Manual (Hall, et al, 1986) reports test-retest correlations, with a two week interval between administrations, as: .65, .86, .82, .81, .76, .84, and .71 for Stages 0 through 6, respectively.

DISCUSSION

The interview and review procedures addressed questions of interpretation by preservice teachers and by a panel of judges. The overall averages (84% and 66%, 76% and 82%, respectively) indicated a fairly low level of problems. Stage and item analyses revealed specific problem areas and indicated items for attention. Stage 3--Management, fared well with both groups, except for stage assignment on item 8 by the reviewers (five of six assigned it to Stage 2). While Stages 0 and 4, Awareness and Consequence, were not perceived as particularly problematical for the judges, they

were more so for the preservice teachers, especially Stage 4; data from both groups pinpointed items 23 (0) and 32 (4). The situation was reversed for Stages 1 and 2, Informational and Personal, with preservice teachers showing few difficulties and the judges perceiving more problems; here again both groups pinpointed two items--35 (1) and 17 (2). Stages 5 and 6, Collaboration and Refocusing, with item 5 on the former and items 2 and 22 on the latter, were problematical for both groups.

These closely linked data sets with their comparable results, and to a lesser extent, their disagreements, provide direction for needed changes before further use of the instrument. The particularly problematical items need to be examined and improved. Additional interviews, with preservice teachers at other times during their experience and with a different protocol, may prove useful. At the present time, a factor analysis and a correlation matrix could be done on extant data. These analyses would identify the number of independent constructs and assignment of items to constructs as perceived by the preservice teachers in this study.

One of the two procedures addressing concurrent validity compared responses on the PSSoCQ to responses on the SoCQ. The correlation coefficients for the PSSoCQ with the SoCQ were within the acceptable range for Stages 3 through 6; with respect to these stages, the PSSoCQ appears to be eliciting responses similar to but not identical to those on the SoCQ. The validity coefficients are somewhat low for Stages 0, 1, and 2. These were identified by the interview (Stage 0) and review (Stages 1 and 2) as problematical, also, although not to the same extent as other stages. An item by item analysis, especially for these three stages, could reveal which particular items are posing difficulties.

The second question regarding concurrent validity involved comparison of responses on the PSSoCQ to those on the Open-Ended measure. There was relatively low agreement between these instruments, approximately 50%. Part of this may be due to the nature of the Open-Ended measure. It does not necessarily elicit all stages, only those of most intense concern, whereas the PSSoCQ provides a ranking for all seven

stages. Scorer accuracy may also play a role; although agreement on the predominating stage was high, 89%, on the secondary stage it was quite low, just 51%, and the overall agreement was a modest 75%. Stage 2 predominated in the Open-Ended measure scores and did appear in 73% of the highest scores using percentile scores and 68% using the raw scores.

These data raise more questions. First, given the time of administration, theory would predict high personal concerns (Stage 2); the procedure should probably be repeated with subjects at other points during their student teaching experience. Second, the use of percentile tables normed on the SoCQ is a questionable practice; norming for the PSSoCQ will be necessary. Third, the data also suggest that the stages construct of the SoCQ, utilized in the PSSoCQ and this study, may be invalid, given the discrepancies appearing between the results on these measures. The results of this procedure, too, point to the need for a factor analysis and calculation of correlation matrices.

The developmental and discriminant aspects of the PSSoCQ have been and continue to be addressed by repeated administrations to preservice teachers during the preparation programs. The data at hand, from one early and one late administration to student teachers in two quite different programs, clearly showed that the instrument reflects differences between the fifth-year and undergraduate groups. While it is beyond the scope and purpose of this study to treat a detailed analysis of the profiles, two of the most striking contrasts are provided.

The fifth-year group, student teaching in urban schools with large classes, often showed high management concerns; this was not true of the undergraduate group, student teaching in rural schools with smaller class sizes. The duration of their preparation programs, in brief, short versus extended, respectively, may also contribute here. Collaboration was the highest concern, both early and late, of the undergraduate group, while this area did not figure strongly with the fifth-year group. During the observation semester prior to student teaching, the undergraduate group spends about

36 hours in classrooms and these classrooms are frequently not those of the teachers who will supervise their student teaching. In contrast, the fifth-year group spends about 100 hours observing and these are usually spent with their future supervising teachers. Additionally, the undergraduate group eventually teaches all day (not true of the fifth-year group); this may well leave less time for contact with their supervising teachers.

While changes over time were found for both groups, these changes did not obviously indicate moving from lower to higher stages of concern. The overall shape of the profiles for both groups was the same both early and late, with the same concerns (by group) figuring highly both times. It may well be that the time, 12 weeks, was insufficient, or, perhaps more likely, that experiences were inadequate for altering concerns. The procedure still in progress, which uses three administrations of the PSSoCQ over both observation and student teaching semesters, will provide data addressing the first of these possibilities.

There are at least two other possible explanations here. One is that the developmental theory, in particular the constructs as defined by the SoCQ and used in the PSSoCQ, are not applicable to preservice teachers. The other is that the instrument is inadequate in its detection of the stages. Given the consistencies between the results of the pilot study using the SoCQ and the results now available from the present study using the PSSoCQ, it may be a matter of fine tuning. The procedures in progress and others suggested here may contribute information needed to resolve questions in this area.

The test-retest reliability results from the procedure used here were below acceptable limits. The one-week interval between administrations and the time of the administration, at the beginning of the observation semester, do not strongly suggest an historical effect, but this cannot be ruled out. The size of the group used was rather small, N = 38, and possibly too homogeneous. The gross analysis done on the stage score totals needs to be replaced with analysis by item; such a procedure could

provide data on individual items that can be compared with interview, review, and the PSSoCQ/SoCQ comparison data to pinpoint problematical items for modification. Following such modification, test-retest reliability should be rechecked, with changes in the protocol as indicated.

While questions about the PSSoCQ remain at this point, these data as a whole do indicate potential for the instrument. One use of the instrument would be in identifying areas of high concern which need addressing by and assistance from those who work with preservice teachers. Another use, as illustrated by one of the procedures in this study, would be the comparison of preservice teachers in different preparation programs. Yet another would be the evaluation of programs designed to address concerns.

As noted, one aspect of the study is still in progress. A number of additional analyses on extant data have been suggested and the authors intend to pursue them. Upon completion of these, the indicated revisions will be made and further tests conducted. It is projected that an instrument will be available for norming studies during the 1988-89 academic year. The authors would welcome any comments, suggestions, or requests to participate in these further studies.

SUMMARY DATA TABLE

STAGE NAME AND NUMBER	INTERVIEWS WITH STUDENTS	REVIEWS BY PANEL OF JUDGES	SoCQ vs PSSoCQ COMPARISON	TEST-RETEST RELIABILITY
0 AWARENESS	85/70	93/100	.49	.73
Problem Statements	12 & 23	(23)	-	-
1 INFORMATIONAL	88/75	73/68	.46	.60
Problem Statements	35	35	-	-
2 PERSONAL	88/75	60/72	.55	.57
Problem Statements	17	13, 17, 28	-	-
3 MANAGEMENT	90/75	70/100	.76	.67
Problem Statements	16	8	-	-
4 CONSEQUENCE	80/60	90/88	.76	.51
Problem Statements	11, 24, 32	32	-	-
5 COLLABORATION	82/55	73/76	.82	.53
Problem Statements	5, 10	5, 29	-	-
6 REFOCUSING	73/55	70/72	.71	.51
Problem Statements	2, 20, 22	2, 9, 22	-	-
OVERALL AVERAGES	84/66	76/82		

Figure 1

COMPARISON OF OPEN-ENDED & PSSOCQ INSTRUMENTS

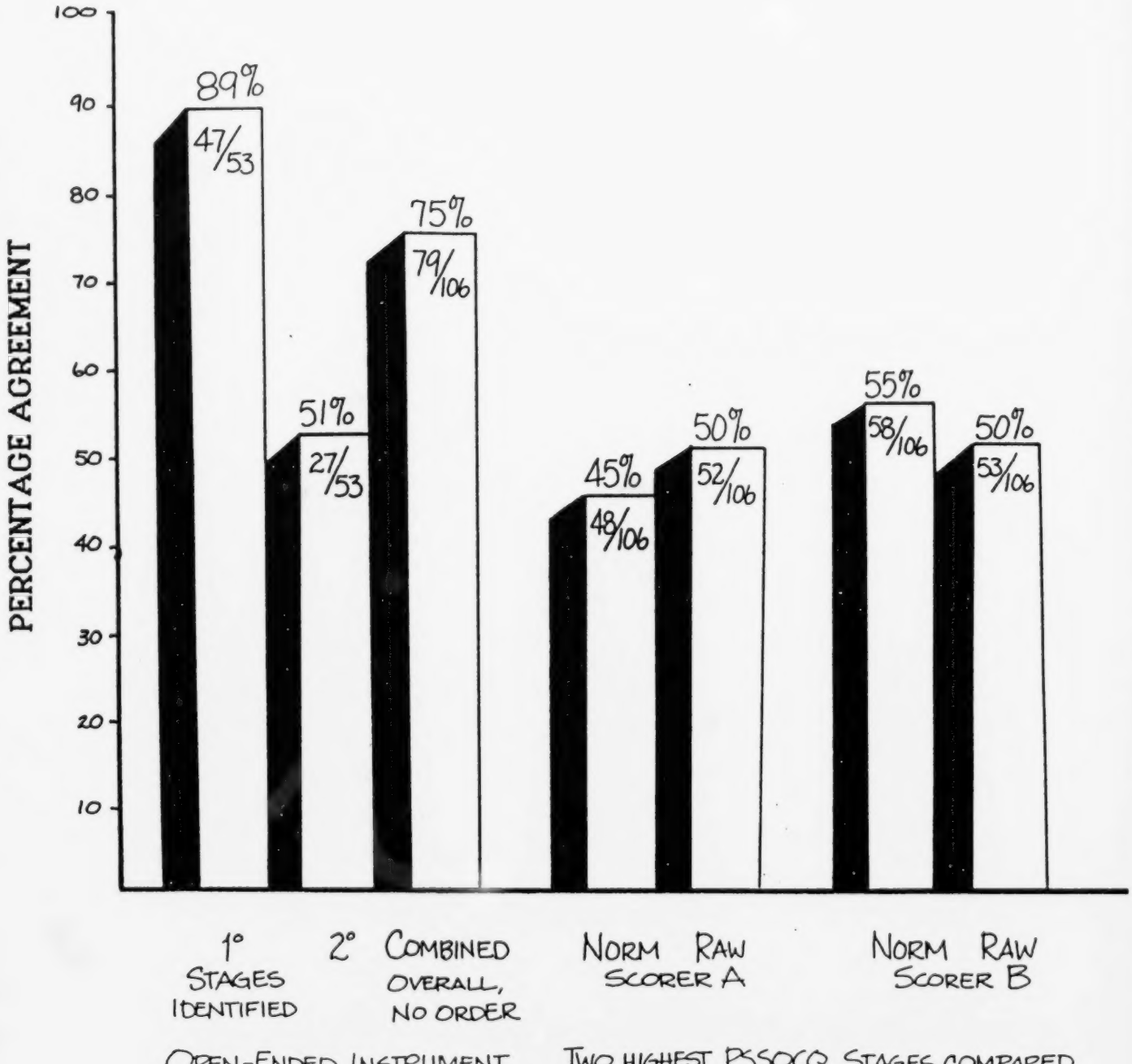
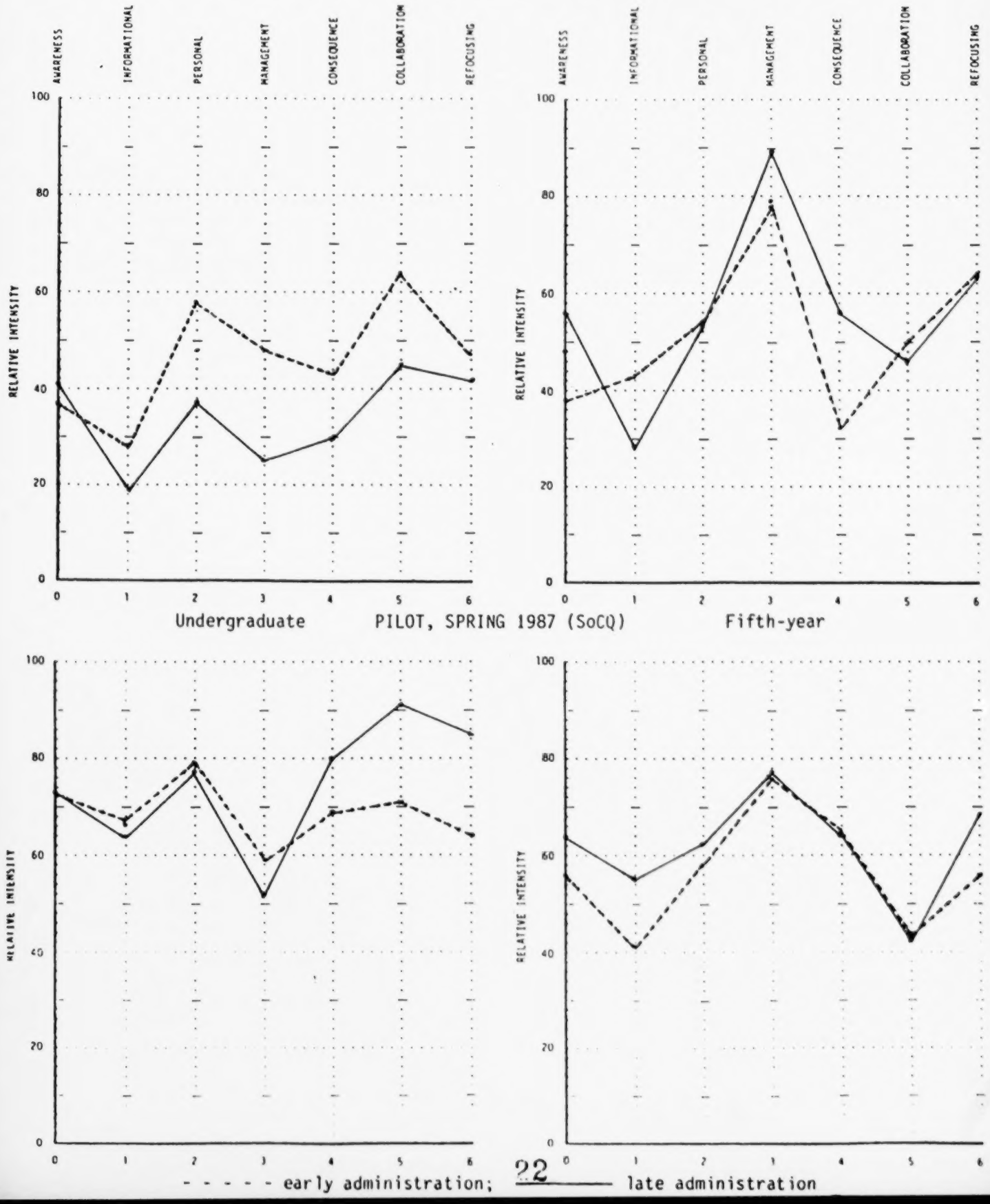


Figure 2: PROFILES



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